

I CLAIM:

1. A process for creating color effects in extrudable material, said process comprising:
 - 5 a) providing a first flow of viscous material of a first color;
 - b) providing a second flow of viscous material of a second color, said second color being different from said first color;
 - 10 c) combining said first flow and said second flow to form a stream of viscous material, said stream being characterized by a first band of said first color and a second band of said second color, said second band being adjacent to said first band;
 - 15 d) feeding said stream through a static mixer such that, upon exiting the static mixer, said stream is further characterized by a third band of a third color, said third color being different from said first and second colors.
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2. A process as defined in claim 1, wherein said third band is located between said first band and said second band.
- 25 3. A process as defined in claim 1, wherein said third color is a mix of said first and second colors.
4. A process as defined in claim 1, wherein said static mixer is operative to mix together a portion of each of said first and second bands for generating said third band.
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5. A process as defined in claim 1, wherein said first, second and third bands of said stream form horizontal layers.
- 5 6. A process as defined in claim 1, wherein said first, second and third bands of said stream form vertical layers.
7. A process as defined in claim 1, wherein said first, second and third bands of said stream form concentric layers.
- 10 8. A process as defined in claim 1, wherein said static mixer includes a helical mixer.
- 15 9. A process as defined in claim 1, wherein, upon exiting the static mixer, said stream is further characterized by at least one additional band located between said third band and either one of said first and second bands.
- 20 10. A process as defined in claim 9, wherein said at least one additional band is characterized by a color selected from the group consisting of: said first color; said second color; a blend of said first and second colors; a blend of said first and third colors; and a blend of said second and third colors.
- 25 11. A process as defined in claim 10, wherein said at least one additional band provides for a gradation in color from either one of said first and second colors to said third color.
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12. A process as defined in claim 1, wherein, once said stream has exited said static mixer, said process includes the step of forming said stream of viscous material into a sheet.
13. A process as defined in claim 1, wherein, once said stream has exited said static mixer, said process includes the step of forming said stream of viscous material into a tube.
14. A process as defined in claim 1, wherein said viscous material is viscous plastic.
15. A process for manufacturing a sheet from extrudable material, said process comprising:
- a) providing a first flow of viscous material of a first color;
 - b) providing a second flow of viscous material of a second color, said second color being different from said first color;
 - c) combining said first flow and said second flow to form a stream of viscous material, said stream being characterized by a first band of said first color and a second band of said second color, said second band being adjacent to said first band;
 - d) feeding said stream through a static mixer such that, upon exiting the static mixer, said stream is further characterized by a third band a third color, said third color being different from said first and second colors, said third

band being located between said first and second bands;

- e) upon the exit of said stream from the static mixer, feeding said stream through a die for forming a sheet of material characterized by a gradation of color.

16. The use of the process of claim 15 to manufacture plastic articles characterized by color gradation effects.

17. The use of the process of claim 15 to manufacture plastic kayaks characterized by color gradation effects.

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18. A system for creating color effects in extrudable material, said system comprising:

- a) a first extruder for providing a first flow of viscous material of a first color;
- 20 b) a second extruder for providing a second flow of viscous material of a second color, the second color being different from the first color;
- c) a feed block for combining said first and second flows into a stream of viscous material, said stream being characterized by a first band of said first color and a second band of said second color, said second band being adjacent to said first band;
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- 30 d) a static mixer for receiving said stream from said feed block, said static mixer operative to partially mix said first and second bands of said stream such that, upon exiting said static

5 mixer, said stream is further characterized by
a third band of a third color, said third color
being different from said first and second
colors, said third band being located between
said first and second bands.

10 19. A system as defined in claim 18, wherein said feed
block is operative to position said first and second
flows in horizontal layers.

20. A system as defined in claim 18, wherein said feed
block is operative to position said first and second
flows in vertical layers.

15 21. A system as defined in claim 18, wherein said feed
block is operative to position said first and second
flows in concentric rings.

20 22. A system as defined in claim 18, wherein said static
mixer includes a helical mixer.

23. A system as defined in claim 18, further comprising
at least one additional extruder for providing at
least one additional flow of viscous material.

25 24. A system as defined in claim 18, wherein upon
exiting said static mixer, said stream is further
characterized by at least one additional band
located between said third band and either one of
30 said first and second bands.

25. A system as defined in claim 24, wherein said at
least one additional band is characterized by a

color selected from the group consisting of: said first color; said second color; a blend of said first and second colors; a blend of said first and third colors; and a blend of said second and third colors.

26. A system as defined in claim 24, wherein said at least one additional band provides for a gradation in color from either one of said first and second colors to said third color.

27. A system as defined in claim 18, further comprising a die for receiving said stream from said static mixer, said die operative to form said stream of viscous material into a sheet.

28. A system as defined in claim 18, further comprising a die for receiving said stream from said static mixer, said die operative to form said stream of viscous material into a tube.

29. A system as defined in claim 18, wherein said viscous material is viscous plastic.

30. An apparatus for creating color effects in extruded material, said apparatus comprising:

- a) an input for receiving a stream of viscous material, said stream being characterized by a first band of a first color and a second band of a second color, said second band being adjacent to said first band;
- b) a static mixer operative to mix at least a portion of said first band with at least a

portion of said second band such that, upon exiting said static mixer, said stream is further characterized by a third band of a third color, said third color being different from said first and second colors, said third band being located between said first and second bands.

31. An apparatus as defined in claim 30, wherein said static mixer includes a helical mixer.

32. An apparatus as defined in claim 30, wherein upon exiting said static mixer, said stream is further characterized by at least one additional band located between said third band and either one of said first and second bands.

33. An apparatus as defined in claim 32, wherein said at least one additional band is characterized by a color selected from the group consisting of: said first color; said second color; a blend of said first and second colors; a blend of said first and third colors; and a blend of said second and third colors.

34. An apparatus as defined in claim 33, wherein said at least one additional band provides for a gradation in color from either one of said first and second colors to said third color.

35. A system for creating color effects in extrudable material, said system comprising:

- a) a first extruder for providing a first flow of viscous material of a first color;
 - b) a second extruder for providing a second flow of viscous material of a second color, the second color being different from the first color;
 - c) a feed block for combining said first and second flows into a stream of viscous material, said stream being characterized by a first band of said first color and a second band of said second color, said second band being adjacent to said first band;
 - d) a static mixer for receiving said stream from said feed block, said static mixer operative to partially mix said first and second bands of said stream such that, upon exiting said static mixer, said stream is further characterized by a third band of a third color, said third color being different from said first and second colors;
 - e) a combining device for combining said stream characterized by a third color with at least one additional stream of viscous material provided by at least one additional extruder.
36. A system for creating color effects as defined in claim 35, wherein said combining device forms a co-extruded stream having at least two layers.
37. A system for creating color effects as defined in claim 36, wherein said system further comprises molding said stream having at least two layers into a final form.